

CLAIMS

1. An integrated item batching and information handling system for producing batches of items, said system comprising:

- 5 – a process flow line with item batching means arranged between an item intake and at least one batch receptacle,
- first sensing means for establishing data representing characteristics of items entering the intake, and
- a computer adapted, for a given batching principle to:
 - 10 – generate a first set of data representing characteristics of a first set of items of a type similar to items entering the intake, and corresponding characteristics expected for batches of the first set of items.

2. A system according to claim 1, wherein the computer is adapted to receive the data from the first sensing means and to generate a second set of data representing characteristics of items entering the intake.

15 3. A system according to claim 2, wherein the computer is adapted to calculate expected conditions of batches resulting from batching of the items entering the intake.

20 4. A system according to any of the preceding claims, further comprising second sensing means for establishing data representing characteristics of the at least one batch receptacle, and wherein the computer is adapted to receive the data and to generate a third set of data representing actual conditions of batches being batched.

5. A system according to claim 4, wherein the computer comprises one central processing unit receiving data from the first and the second sensing means.

25 6. A system according to any of the preceding claims wherein the computer comprises additional processing units connected between at least one of the sensing means and the central processing unit.

7. A system according to any of the preceding claims, further comprising a data storage means and data entering means allowing entering of data sets into the data storage means.

5 8. A system according to any of the preceding claims, comprising a conveyor for conveying the items from the intake passed the sensor and the batching means to the at least one batch receptacle.

9. A system according to claim 8, wherein the computer is adapted to generate and compare data sets during the conveying of items.

10 10. A system according to any of the preceding claims, wherein at least one of the first and second sensing means comprises a scale for determining data representative of a weight of an item or batch receptacle.

15 11. A system according to any of the preceding claims, wherein the computer system is adapted to generate a fourth set of data representing characteristics of a fourth set of imaginary items, and corresponding conditions of batches expected for a theoretically ideal batching of the fourth set of items.

12. A system according to claims 2-11, wherein the computer is adapted generate a correlation between two of the first, second, third and fourth sets of data.

20 13. A system according to any of the preceding claims, wherein the computer is adapted to visualize at least one of the first, the second, the third and the fourth sets of data graphically on a screen.

14. A system according to any of claims 4-12, wherein the computer is adapted to visualize a correlation between two or more of the first, second, third and fourth sets of data.

25 15. A system according to claims 12-13, wherein the computer is adapted to visualize more than one data set or more than one correlation in a single screen image.

16. A system according to any of the preceding claims, wherein at least one of the first and the fourth sets of data represent one of:

an average weight of the first set of items, and

a standard deviation of the first set of items,

and one of:

5 a corresponding average overweight expected for batches of the first set of items, and

a number of batches expected to have an underweight.

17. A system according to any of the preceding claims, wherein at least one of the second and third sets of data represents one of:

an average weight of the first set of items, and

10 a standard deviation of the first set of items.

18. A system according to any of the preceding claims, wherein the computer system comprises data input means allowing a user to enter data into at least one of the first, second and third sets of data.

15 19. A system according to any of the preceding claims, wherein the computer system is adapted to recalculate expected conditions of batches based on the first and second sets of data based on a user request.

20 20. A method of analyzing process data in a batching process of an integrated item batching and information handling system of the kind comprising a process flow line with item batching means arranged between an item intake and at least one batch receptacle, first sensing means for establishing data representing characteristics of items entering the intake, said method comprising the steps of

- conveying items between an item intake and at least one batch receptacle in an item processing line,
- establishing data representing characteristics of items entering the intake, and

- generating a first set of data representing conditions of a first set of items, and corresponding conditions expected for batches of the first set of items.

21. A method according to claim 20, wherein data is received from the first sensing means and a second set of data representing characteristics of items entering the intake is generated.

22. A method according to claim 21, wherein expected conditions of batches resulting from batching of the items entering the intake is calculated.

23. A method according to any of claims 20-22, wherein data representing characteristics of the at least one batch receptacle is received from second sensing means, and wherein a third set of data representing actual conditions of batches being batched is generated.

24. A method according to any of claims 20-23, further comprising generating a fourth set of data representing conditions of a fourth set of imaginary items, and corresponding conditions of batches expected for a theoretically ideal batching of the fourth set of items.

25. A method according to any of claims 21-24, further comprising generating a correlation between two of the first, second, third and fourth sets of data.

26. A method according to any of claims 20-25, further comprising visualising at least one of the first, the second, the third and the fourth sets of data graphically on a screen.

27. A method according to any of claims 21-26, further comprising visualising a correlation between two or more of the first, second, third and fourth sets of data.

28. A method according to claims 26-27, wherein more than one data set or more than one correlation is visualized in a single screen image.

29. A method according to any of claims 20-28, wherein the data represents weights of the items and batches.